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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dietmar Rudolph

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EXAMINER

JAMAL, ALEXANDER

ART UNIT

PAPER NUMBER

2614

MAIL DATE

DELIVERY MODE

02/04/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/980,809	Applicant(s) RUDOLPH, DIETMAR	
	Examiner ALEXANDER JAMAL	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,6-8,10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The examine notes that the previous non-final rejection filed 11-23-2009 has been vacated and a new non-final rejection submitted.
2. As per the included interview summary, examiner notes that applicant has admitted the ‘multi-stage modulator’, ‘internet’, ‘data base storing’, ‘automatic switchover’ and ‘frequency prognosis’ terms in the claims are –not- described in the specification, and are read to be well known terms that one of skill in the art would obviously know how to apply to applicant’s claimed invention (or to any other invention in the same field).
3. The examiner notes that applicant’s specification does not specifically define the term ‘digital quality data’ in the specification. As such the examiner reads the term broadly as a digital indication of a signal parameter.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. **Claims 4,8,12-14,6,7,10,11** rejected under 35 U.S.C. 103(a) as being unpatentable over Kleider et al. (6084919).

As per **claim 4**, Kleider discloses a system that performs a method to improve the quality by controlling the parameters of a digital radio transmission (ABSTRACT, Fig. 5). The method comprises receiver (**a receiver station receiving a digital radio program**) 16 (Fig. 2) adjacent to target area 14 that evaluates quality data via blocks 34,36, to determine parameters C,F,B,P,b that are transmitted automatically to transmitter 12. The transmitter 12 can be operative in a **broadcast mode (Col 11, lines 60-67)** which comprises sending out radio programs. Kleider discloses that the wireless network may be connected to the internet (Col 1 lines 10-20). The channel classification monitor 26, in combination with block 34 perform a frequency prognosis via transmitted parameters Cce' and F for the purpose of influencing the channel coder 22 and source coder 20 of the transmitter. The parameters are stored in spectrum table memory 27. The parameters also need to inherently be stored at every processing stage of the system and method for the purpose of allowing the digital processing to occur. The spectrum is produced via digital means in a digital processing system. The parameters indicating the signal characteristics are digital signals. Either of these can read as 'digital quality data'. In addition the digital received data can be considered the 'digital quality data' because that is analyzed in order to determine the spectrum. The examiner notes A/D converter (Col 5 lines 20-40), and notes that all of the processing is done digitally. The transmitter is reconfigured for alternative transmit frequencies (**the multi mode modulator can**

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vary the transmit frequencies of the system (Col 4 lines 30-45)) for subsequent transmissions, however, Kleider does not specify that the subsequent transmissions are of the same radio program.

Kleider discloses that the transmitter may be a broadcast transmitter. The examiner contends that it is well known in the art that broadcasting transmitters may broadcast the same program over and over at subsequent times. (such as is done in tv programming). Since Kleider's device is constantly updating the transmit parameters any subsequent programming (including the **same program**) will use the previously determined transmit parameters. It would have been obvious to transmit the same program for the purpose of making the program more accessible.

As per **claim 8**, it is rejected as per the claim 4 rejection. The multi mode modulator can vary the transmit frequencies of the system (Col 4 lines 30-45).

As per **claims 12,13**, they are rejected as per the claim 8 rejection. The block 34 of Fig. 2 comprises a feedback channel that increases reception quality and coverage reliability by pre-selecting better coding/modulation and the system uses (col 11,12) additional means to determine the parameters when the transmitter is in broadcast mode.

As per **claim 14**, it is rejected as per the claim 12 rejection. Kleider discloses (Col 4 lines 30-40) that the multi mode modulator can vary the type of modulation. Examiner notes that a QAM modulation (which is well known in spread spectrum communications) may have any number of different stages (carriers). Examiner reads

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each of these as a different 'type' and notes that the modulator and channel interleaver would function to vary the number of stages in order to increase transmission quality.

As per **claims 6,10**, the transmission is wirelessly broadcast (Fig. 5).

As per **claims 7,11**, they are rejected as per **claim 4** rejection.

Response to Arguments

1. Applicant's arguments with respect to all claims have been considered but are not persuasive.

As per applicant's arguments that Kleider does not disclose a receiver receiving and analyzing a digital radio signal, the examiner disagrees and notes Kleider Fig. 2 which clearly shown a transmitter 12 sending a digital radio signal to a receiver 16, so that the receiver may analyze the received transmission, and determine parameters to send back to the transmitter for a subsequent transmission via a separate link 40.

Kleider discloses that the channel is analyzed via an incoming signal (which may be wired or wireless (received high frequency digital signal)) (Col 5 lines 1-40). This may be thought of as digital quality data, in addition to the parameters or the spectrum estimate. All of these are used to vary the transmission parameters.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498, and whose email address is alexander.jamal@uspto.gov

The examiner can usually be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone or email are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499.

The fax phone numbers for the organization where this application or proceeding is assigned are **571-273-8300** for regular communications and **571-273-8300** for After Final communications.

/Alexander Jamal/

Primary Examiner, Art Unit 2614

Examiner Alexander Jamal

February 4, 2010